START

ENGINEERING CHANGE NOTICE

1. ECN ~~142793~~ Proj. ECN B-714-86			
2. ECN Category (mark one): Supplemental ■; Direct Revision ☐; Change ECN ☐; Temporary ☐; Supersedure ☐; Discovery ☐; Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No.: A. R. Snowhite, KEH, E6-32, 6-6741		4. Date: 03-28-91
	5. Project Title/No./Work Order No.: See Block 12	6. Bldg./Sys./Fac. No.: 218-E-16	7. Impact Level: 3
	8. Document Number Affected (include rev. and sheet no.): See Block 12	9. Related ECN No(s).: None	10. Related PO No.: N/A
11a. Modification Work: ☐ Yes (fill out Blk. 11b) ☐ No (NA Blks. 11b, 11c, 11d) UNKNOWN	11b. Work Package Doc. No.: UNKNOWN	11c. Complete Installation Work: Cog. Engineer Signature & Date	11d. Complete Restoration (Temp. ECN only): Cog. Engineer Signature & Date

12. Description of Change

Block 5: B-714, Grout Vault Pair (218-E-16-102 & 103)(218-E-16-104 & 105)/ER8007

Block 8: Specification B-714-C2, Rev 1
(V-B714C2-003, Rev 1)

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1) SECTION 01400, APPENDIX A, Pg 01400-A-6

Delete Spec ref. 2.1.4, 2.1.4.1, 2.1.4.2, and 2.1.4.3 in their entirety. Replace with new ref. 2.1.4, 2.1.4.1 thru 2.1.4.6 as shown on page ~~4~~ 5 ARL 4-8-91 of this ECN.

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*** BLOCK 12 CONTINUED ON PAGE 3 ***

Block 13b:
This ECN does not affect the Technical function of the sensing cable or of any of the sensing cable accessories.

13a. Justification (mark one)	13b. Justification Details
Criteria Change ☐ Design Improvement ☐ Environmental ☐ As-Found ■ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐	The minimum diameter opening for installation of specified sensing cable, as stipulated by mfr, is 0.75". Opening between outer 4" pipe and pipe supports at 90° pipe turns is 0.625". Due to this condition a "Low Profile" sensing cable (0.625" opening req'd) is being specified in place of originally specified cable. The manufacturer's stipulated diameter of 0.75" was not published at the time of the original design. *** CONTINUED IN BLOCK 12 ***

14. Distribution (include name, MSIN, and no. of copies)

KEH DISTRIBUTION		~~J. K. Epperley~~ (EDC)	~~S0-05~~	RELEASE STAMP
Const Doc Cntl	E2-50	O. A. Halverson	R3-09	OFFICIAL RELEASE BY WHC
Engrg Doc Cntl	E6-52	J. S. Hill [2]	R4-57	DATE APR 11 1991
		K. S. McCullough	N1-83	STATION 12
WHC DISTRIBUTION		D. B. Powell [4]	R4-03	13
Project Files	R1-28	J. E. Vanbeek	R3-27	
S. R. Briggs(PE)	R3-27	Lupe Garza	A3-80	
T. K. Cordray	S1-54	DOE		
STATION 10	A3-87	A. G. Lassila	A5-18	

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15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
■ Yes	Additional ☒ $ 1820	Additional ☒ $ 6540	Improvement ☐ NA
☐ No	Savings ☐ $	Savings ☐ $	Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐		☐
Environmental Report	☐	Inspection Plan	☐		☐
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision

20. Approvals

OPERATIONS AND ENGINEERING	Signature	Date	ARCHITECT-ENGINEER	Signature	Date
Cog./Project Engineer	D R Bruy	4/11/91	PE	K C Burgard	4/10/91
Cog./Project Engr. Mgr.	HRB / J E Norbeck	4/11/91	QA	T D Harp / R W Hult	4-10-91
QA	J. K. Cardinal	4-11-91	Safety	C. D. Eggers	4/9/91
Safety			Design	ELEC: A. R. Snowhite	4-8-91
Security			Other	ENVIR: R Hollenbeck	4-10-91
Proj.Prog./Dept. Mgr.				SPECS: J. E. Breed	4/10/91
Def. React. Div.				PLE: E. G. Goohey for G. Koci	4/10/91
Chem. Proc. Div.					
Def Wst. Mgmt. Div.			DEPARTMENT OF ENERGY		
Adv. React. Dev. Div.					
Proj. Dept.					
Environ. Div.			ADDITIONAL		
IRM Dept.					
Facility Rep. (Ops)					
Other					

2) SECTION 16400

A) Change paragraph 2.1.4 and 2.1.4.1 to read as follows:

2.1.4 Sensing Cable, Low Profile Type with 18 inches of four conductor leader cable, factory connected to each end: Raychem TraceTek, Catalog No. TT 3000-MSC-XX-LP. "XX" denotes cable length in feet. Specify custom cut length based on distance between two pull points.

2.1.4.1 Connectorized Jumper Cable: Male connector on one end, female connector on opposite end, Raychem TraceTek, Catalog No. TT-MJC-3-MC. (Required only at pull points that have a sensing cable termination.)

B) Change paragraph 2.1.4.2 heading to read: End Termination:

C) Add paragraph 2.1.4.3, 2.1.4.4, 2.1.4.5, and 2.1.4.6 as follows:

2.1.4.3 Scotchlok plastic connector, for connecting one half of Connectorized Jumper Cable to Sensing Cable, Raychem TraceTek, Catalog No. TT-JSK-SL, package quantity 20.

2.1.4.4 Heat Shrinkable Tubing, for covering of Connectorized Jumper Cable connectors after both connectors are connected together, Raychem TraceTek.

2.1.4.5 Portable Test Box, Raychem TraceTek, Catalog No. TT-PTB-1000 with operating instructions for testing of TT 3000-MSC-XX-LP sensing cable.

2.1.4.6 Sensing Cable Map: Provide sensing cable map that shows entire sensing cable routing from Grout Processing Facility to each of four vaults (102-105). Indicate pipe length in segments not greater than 20 feet and indicate the location of all pull point terminations. Provide glass and frame for map. Maximum size not larger than 40 inches by 28 inches.

D) Change words in paragraph 3.2.8.1 from: access port to pull point.

E) Change paragraph 3.2.8.3 to read as follows:

3.2.8.3 Connect one half of a Connectorized Jumper Cable to the end of a Sensing Cable using Scotchlok plastic connectors, 8 connectors required at each pull point where sensing cable is terminated. Terminations shall be made at the following listed pull points: PP-11, PP-12, PP-14, PP-16, PP-21, PP-22, Vault Pit 102, Vault Pit 103, PP-12, PP-24, PP-26, PP-28, PP-30, PP-32, PP-38, Vault Pit 104, and Vault Pit 105.

F) Renumber paragraph 3.2.8.4 and 3.2.8.5 to 3.2.8.5 and 3.2.8.6 respectively.

G) Add new paragraph 3.2.8.4 as follows:

3.2.8.4 Connect together male and female connectors of Connectorized Jumper Cables and install heat shrinkable tubing over both connectors. Shrink using heat gun.

H) Change paragraph 3.3.3.1 to read as follows:

3.3.3.1 During installation immediately after sensing cable is pulled in and terminated: Connect one end of the sensing cable to the portable test box and an end termination to the opposite end of sensing cable. Check that the sensing cable is functioning properly by following operating instructions provided with the portable test box. If test indicates sensing cable is not functioning properly, replace the sensing cable and retest.

I) Delete paragraph 3.3.3.2.

J) Replace Approval Data List and Vendor Information list with revised Lists shown on pages 6 & 7 of this ECN.

SPEC/DWG REF	ITEM DESCRIPTION	ACCEPTABLE VALUE, CONDITION OR TOLERANCE	METHOD OF VERIFICATION	SAMPLE SIZE
16400				
2.1.4	Sensing Cable	Identification: Raychem TraceTek Catalog No. TT 3000-MSC-XX-LP Configuration: As described in manufacturer's catalog	Visual: Catalog number on shipping container	100%
2.1.4.1 thru 2.1.4.6	Sensing Cable Accessories	Identification: Raychem TraceTek Catalog Nos. TT-MJC-3-MC (Connectorized Jumper Cable) TT-MET-MC (End Termination) TT-JSK-SL (Plastic Connector) Heat Shrink Tubing TT-PBT-1000 (Portable Test Box)	Visual: Catalog number on shipping container or on item	100%
		Sensing Cable Map	Submit for approval	100%

B714C2-SP1.1000

Project No	B-714 Grout & Waste Disposal
Project Title	Facility Grout Vault Pair (218-E-16)
Specification Section	16400

APPROVAL DATA LIST

("X" Indicates Required Data)

1 EPN IDENTIFICATION	2 DESCRIPTION	3 REFERENCE DRAWING	4 SPECIFICATION PARAGRAPH	5 DATA									6 REMARKS
				Dimensional Drawings	Equipment Weights	Specifications	Material Description	Performance Data	Circuit or Control Diagrams	Data Sheets	Illustrative Cuts	Installation Instructions	
	Annunciator	H-2-77640	2.2.3	X	X	X					X		
	Sensing Cable	H-2-77635	2.1.4			X						X	
	and Accessories	Sh 1 & 2	thru										
		H-2-77596	2.1.4.6										
		H-2-78501											
		Sh 1 & 2											
		H-2-78467											

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Project No B-714 Grout & Waste Disposal

Project Title Facilities Grout Vault Pair (218-E-16)

Specification Section 16400

VENDOR INFORMATION LIST

("X" Indicates Required Data)

1 EPN IDENTIFICATION	2 DESCRIPTION	3 REFERENCE DRAWING	4 SPECIFICATION PARAGRAPH	5 VENDOR INFORMATION (VI)											
									Instructions						
				Dimensional Drawings	Equipment Weights	Specifications	Certified Test Data	Circuit or Control Diagram	Installation	Operation	Maintenance	Spare Parts List	Data Sheets	Illustrative Cuts	
	Annunciator	H-2-77640	2.2.3			X		X		X	X	X		X	
	Sensing Cable	H-2-77635	2.1.4	*		X			X						
	and Accessories	Sh 1 & 2	thru												
		H-2-77596	2.1.4.6												
		H-2-78501													
		Sh 1 & 2													
		H-2-78467													
	* MAP ONLY														

END OF SECTION 16400 - 13